

New York City Hotels Energy Related Legal and Tax Compliance

By Charles R. Goulding and Daniel Penza

Operating in a very strong economic environment New York City (NYC) hotels are using the Cities new mandatory energy benchmarking performance requirements to evaluate their energy performance and then making the necessary facilities upgrades to meet new federal and city energy related mandates. The public disclosure of New York City hotel energy performance is critical to hotel managers since many leading companies and guests will not want to book rooms in hotels performing below the 50 percentile energy performance level. This article discusses the current NYC hotel economic and investment environment, new NYC hotel energy benchmarking requirements, Federal building product mandates impacting hotels, new NYC building energy code requirements applicable to hotels and the special federal tax incentives available to hotels.

NYC's Benchmarking Requirements

With the new local benchmarking law in effect, all buildings in NYC with an area over 50,000 square feet are obligated to submit an annual energy benchmark rating. Energy benchmarking requires data submissions reporting total energy and water use for a building for the previous year using US Environmental Protection Agency's web-based Portfolio Manager. The NYC law include all buildings over 50,000 gross square feet and includes two or more buildings on the same lot that total 100,000 square feet or more.

This new benchmarking law requires New York City building owners or operators to submit their energy data and have it compared to similar buildings within the City. We believe that hotels performing below the 50 percentile level for building energy and water use (performing lower than half of the comparable hotels) will be avoided by guests of leading companies committed to sustainability.

Hotels in Manhattan

New York City is the biggest city by population in the nation and with over 48.7 million visitors in the past year with an average of 80% those visitors occupying a hotel room. There are over 230 total hotels in Manhattan, the largest Manhattan hotels that have the largest energy savings opportunity are seen below.

New York City's Largest Hotels				
Hotel	Number of Rooms*	Number of Suits	Number of Meeting Rooms	Number of Employees
Hilton New York	1980	46	40	1500
New York Marriott Marquis	1949	57	54	1850
Sheraton New York Hotel & Towers	1750	57	41	1289
New York's Hotel Pennsylvania	1700	35	11	465
Grand Hyatt New York	1311	55	45	900
Milford Plaza Hotel	1300	20	3	300
The Waldorf - Astoria	1245	209	40	1600
Roosevelt Hotel New York	1015	52	19	600
Park Central New York	935	20	10	418
Edison Hotel	900	35	1	260

*Number of rooms includes suites

Source: Crain's New York Businesses

The Energy Cost Opportunity

Energy cost represents the single fastest-growing operating cost in the lodging industry. Through a strategic approach to energy efficiency, a 10% reduction in energy consumption would have the same financial effect as increasing the average national daily room rate (ADR) by \$1.35 in full-service hotels. Energy efficiency provides hotel owners cost savings that benefit the bottom line. In NYC a 10% energy cost reduction, with an average room rate of \$230, any cost reduction is welcomed. Efficiency also improves the service of capital equipment, enhances guest comfort, and demonstrates a commitment to climate stewardship.

New York City Energy Conservation Code

As of December, 2009, New York City's Energy Conservation Code (ECC) is effective requiring the use of modern technical methods, devices and improvements that tend to minimize consumption of energy for newly constructed commercial and specified existing buildings. NYC's EEC is intended to comply with the requirements of the American Recovery and Reinvestment Act of 2009 (ARRA).

ARRA specifies that states and localities should implement the ASHRAE 90.1-2007 standard. NYC's EEC is required for new construction or additions, alterations, renovations or repairs to an existing building as if they relate to new construction.

For lighting, the NYC's EEC requires that if 50% or more of the lighting in a space is being replaced than all the lighting has to be retrofitted. By requiring a complete lighting upgrade for 50% or more restoration the law facilitates a higher benchmarking rating and EPAct tax incentives discussed below.

Federal Lighting Bans

New York City hotels are impacted by three federal lighting bans related to:

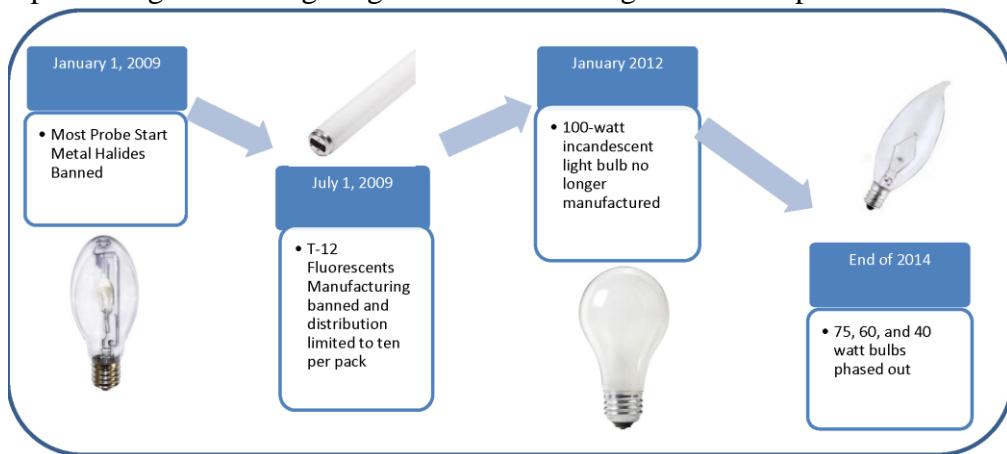
1. Metal Halides
2. T-12 Fluorescent

3. Incandescent lighting

As of January 1, 2009, there is a national manufacture ban on most probe start metal halides. As of July 1, 2010, T-12 fluorescent lights were similarly banned and limited to ten per pack for distribution.

Starting in 2012 manufactures are banned from manufacturing and importing the traditional 100-watt light bulbs. Bulbs will have to be more energy efficient using no more than 72 watts, even including halogen incandescent, compact fluorescent(CFL) and light-emitting diode(LED) light bulbs. This bulb change is part of the federal Energy Independence and Security Act signed in 2007. Beginning in 2012 new bulbs must use 25 to 30 percent less energy nationwide starting with the 100-watt light bulb. Other incandescent bulbs such as 75, 60 and 40 watt bulbs will be phased out by 2014.

A diagram presenting all three lighting bans in chronological order is presented below.



Simple High Economic Payback Energy Efficient Opportunities

For hotels one of the best energy related economic paybacks is with a simple energy efficient lighting retrofit. LED's are becoming more popular in highly used lighting areas including guest rooms and hotel restaurants.

New lighting technology uses substantially less energy while providing better lighting with a much longer life, reducing lamp inventory storage and maintenance cost. Moreover hotels with prior generation lighting will increasingly find themselves in the bottom 50% benchmarking category.

New York Hotel Energy Rebates

NYSERDA is offering an incentive to commercial buildings up to \$7,000 of assistance to complete their benchmarking and 50% of cost for additional assistance above \$7,000. Lighting systems that would qualify for NYSERDA's assistance and increase a buildings benchmarking rating can be seen below.

Energy Efficient Lighting Systems That comply with NYSERDA's Pre-Qualified Lighting Standards for incentives		
Lighting Replacement or Install		Eligible Installations
LED Exit Signs		New LED Exit Sign
High Performance T8 Relamp and Reballast		Upgrade an Existing T12 Fixture with New High Performance T8 Lamps and Ballasts
Reduced Wattage T8 Relamp and Reballast		Upgrade an Existing Fixture with New Reduced Wattage T8 Lamps and Ballasts
New Fluorescent Fixtures		New Lighting Fixture with T5 or High Performance T8 Lamps and Ballasts
High Efficiency Troffer Fixture		Recessed or Surface Mounted High Efficiency Troffer Fixture with High
Pendant/Wall Mounted Indirect Fluorescent Fixture		Indirect and Direct/Indirect T5 or High Performance T8 Fixtures
High Efficiency Low Glare Fixture		Recessed High Efficiency T5 or High Performance T8 Fixture with Low Glare
High Intensity Fluorescent		New Fluorescent Fixture for High and Low Bay Applications
Lighting Controls		Eligible Installations
Wall Mounted Occupancy Sensors		Wall Mounted Occupancy Sensors
Remote Mounted Occupancy Sensors		Remote Mounted Occupancy Sensor

*The Consortium for Energy Efficiency maintains specifications and a list for High Performance and Reduced Wattage T8 lamps and ballasts.

Hotel Energy Efficient HVAC Upgrades

NYC hotels are air conditioned properties and HVAC (heating ventilation and air conditioning) is the biggest energy user in air conditioned buildings. Replacing an HVAC unit in a hotel with a high efficient one will have the greatest impact on the benchmarking rating.

As seen below are some measures that show HVAC Systems with their minimum efficiency, these systems will help the benchmark rating for hotels.

Unitary HVAC and Split Air Systems Efficiency Levels		
That comply with NYSERDA's Pre-Qualified HVAC Standards for incentives		
Unitary Equipment Size		Minimum Efficiency
Tons	Btu/h	
Split System ≤ 5.4	≤ 65,000	14.0 SEER
Single Package ≤ 5.4	≤ 65,000	14.0 SEER
> 5.4 to ≤ 11.25	> 65,000 to ≤ 135,000	11.5 EER
> 11.25 to ≤ 20	> 135,000 to ≤ 240,000	11.5 EER
> 20 to ≤ 63	> 240,000 to ≤ 760,000	10.5 EER
> 63	> 760,000	9.7 EER

Hotels Section 179D Energy Efficiency Tax Deductions

Under Code Sec. 179D, as enacted by the Energy Policy Act of 2005 (EPAct), hotels who make qualifying energy-reducing investments can obtain immediate tax deductions of up to \$1.80 per square foot.

If the building project doesn't qualify for the maximum of \$1.80 per square foot immediate tax deduction, there are tax deductions of up to \$0.60 per square foot for each of the three major building subsystems: Lighting, HVAC and the building envelope. The building envelope covers every part of the building's exterior perimeter that touches the outside world including roof, walls, insulation, doors, windows and foundation. Hotels with central HVAC systems are normally eligible for the HVAC EPAct tax deduction.

Below is an EPAct Tax Planning Example for a hypothetical hotel group composed of multiple leading hotel brands, illustrating lighting and central HVAC EPAct opportunities.

Property Name & Location	Hotel Square Feet	Parking Garage Square Feet	Central Chiller	Best Potential Square Feet				EPAct Deduction
				Lighting	HVAC	Envelope	Total	
Sheraton Four Points	150,000	50,000	Yes	200,000	150,000	150,000	500,000	\$300,000
Hilton Garden Inn	120,000	-	No	120,000	-	-	120,000	\$72,000
Marriott Courtyard	80,000	-	No	80,000	-	-	80,000	\$48,000
Radisson	100,000	40,000	Yes	140,000	100,000	100,000	340,000	\$204,000
Hyatt	120,000	30,000	No	140,000	-	-	140,000	\$84,000
La Quinta	60,000	-	No	60,000	-	-	60,000	\$36,000
Holiday Inn Express	70,000	-	No	70,000	-	-	70,000	\$42,000
Total	700,000	120,000		810,000	250,000	250,000	1,310,000	\$786,000

Lighting, heating and cooling are the most important factors in the energy benchmark rating system and improvements in those measures will improve the benchmarking results. The EPAct tax law requires specific achievements in the building's lighting, heating and cooling system to qualify for tax savings. Buildings that achieve EPAct tax savings will also receive the highest benchmarking results.

Potential Tax Benefits for Energy Efficient Hotels

Of the over 230 hotels located in Manhattan, most of them are larger than the mandatory benchmarking 50,000 square feet compliance level. Assuming that the average sized hotel in Manhattan is about 120,000 square feet, the potential EPAct tax deduction with efficient lighting, heating and cooling could be substantial, as illustrated in the table below.

Potential EPAct Deductions for All NYC Hotels						
Property & Size	Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum	Total
		Minimum Deduction	Maximum Deduction			
Approximately 230 Hotels with an Average of 120,000 sq ft each	27,600,000	\$8,280,000	\$16,560,000	\$16,560,000	\$16,560,000	\$49,680,000

Current Energy Benchmarked Hotels and Potential Tax Benefits

Currently there are two NYC hotels publicly listed on the EPA's Energy Benchmarking Portfolio Manager, Hotel Penn and New York Marriott East Side, both being rated by Energy Star since 2008 and 2007 respectively. Because of their high energy benchmarking rating, these hotels could have potential EPAct tax deductions as follows.

Potential EPAct 179D Tax Deductions Available for Current Energy Benchmarked Hotels Under Current Legislation							
Property	Energy Benchmarking Rating	Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
			Minimum Deduction	Maximum Deduction			
Hotel Penn 401 Seventh Ave New York, NY	81	1,412,862	\$ 423,859	\$ 847,717	\$ 847,717	\$ 847,717	\$ 2,543,152
New York Marriott East Side 525 Lexington Ave New York, NY	77	391,318	\$ 117,395	\$ 234,791	\$ 234,791	\$ 234,791	\$ 704,372

The potential EPAct tax deduction for New York City's ten largest hotels is presented below.

Potential EPAct Deductions for NYC's 10 Largest Hotels						
Hotel	Estimated Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
		Minimum Deduction	Maximum Deduction			
Hilton New York	1734000	\$520,200	\$1,040,400	\$1,040,400	\$1,040,400	\$3,121,200
New York Marriott Marquiz	1660650	\$498,195	\$996,390	\$996,390	\$996,390	\$2,989,170
Sheraton New York Hotel & Towers	1455000	\$436,500	\$873,000	\$873,000	\$873,000	\$2,619,000
New York's Hotel Pennsylvania	1412862	\$423,859	\$847,717	\$847,717	\$847,717	\$2,543,152
Grand Hyatt New York	1048800	\$314,640	\$629,280	\$629,280	\$629,280	\$1,887,840
Milford Plaza Hotel	1040000	\$312,000	\$624,000	\$624,000	\$624,000	\$1,872,000
The Waldorf - Astoria	996000	\$298,800	\$597,600	\$597,600	\$597,600	\$1,792,800
Roosevelt Hotel New York	842000	\$252,600	\$505,200	\$505,200	\$505,200	\$1,515,600
Park Central New York	763000	\$228,900	\$457,800	\$457,800	\$457,800	\$1,373,400
Edison Hotel	720000	\$216,000	\$432,000	\$432,000	\$432,000	\$1,296,000
Total	11672312	\$3,501,694	\$7,003,387	\$7,003,387	\$7,003,387	\$21,010,162

Conclusion

The actual NYC benchmarking process is fairly straight forward but evaluating and acting on the benchmarking results can be a great business opportunity. Achieving high performance results can result in a more valuable hotel for owners and more importantly a more attractive property for certain guest and convention categories.

Hotel energy benchmarking results will be analyzed and interpreted differently by the various

stakeholders. A sophisticated hotel owner will want to know how its building compares against it peers to determine performance, evaluate energy operating costs, impact building valuation and attract guests. Hotel owners and operators who produce great results will be in high demand and the bottom performers may find themselves with higher vacancies.

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